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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,804	10/20/2008	**Nathan Kane**	TP15054USPCT	4853

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EXAMINER	
WEISZ, DAVID G	
ART UNIT	**PAPER NUMBER**
1797	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,804	KANE ET AL.	
	Examiner	Art Unit	
	DAVID WEISZ	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27-43* is/are pending in the application.

4a) Of the above claim(s) *39-43* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *27-43* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 October 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 27-38, drawn to a method for analysis of a solid material.

Group II, claim(s) 39-43, drawn to a system for analyzing a solid material.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical features present in all the groups are a coring tool for extruding a plug, means for exposing the plug to radiation and means for detecting the radiation with a detector. This cannot be a special technical feature under PCT Rule 13.2 because the feature is shown in the prior art. Duffield et al. (US 2003/0131905) in view of Vann et al (US 7101510) teaches a coring tool for extruding a plug *(Duffield, Figure 6c)*, exposing the sample to radiation and detecting radiation with a detector *(Vann, Col3/L21-31),* therefore presenting a lack of unity between the groups a posteriori. It would have been obvious to combine the radiation detection of Vann with the method and apparatus of Duffield because it is a standard analysis technique for a variety of samples.

During a telephone conversation with Jamie East on 4/17/09 a provisional election was made without traverse to prosecute the invention of Group I, claims 27-38. Affirmation of this election must be made by applicant in replying to this Office action. Claims 39-43 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 27-30 and 32-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Duffield et al (US 2003/0131905) (Duffield) in view of Vann et al (US 7101510) (Vann).

Regarding claims 27-30 and 32-38 Duffield discloses a method for analysis of a solid sample including a coring tool for coring a sample into a compressed plug *[0015](Figure 6c)(claim 28)* and extruding the plug with a pin *(Figure 6c)*. Additionally, the reference discloses that the pin position is metered to define a volume of solid *[0015](Claim 32)*. While the reference does not specifically disclose a micrometer for

adjusting the pin, it is conventional to use such a device for adjusting pins of a micron scale *(claim 33)*. Additionally, the reference does not specifically disclose that the sample is analyzed with radiation, or that the coring tool and extruding sample is loaded onto a rack, with a top plate having holes on a lifting plate.

Vann discloses a sample/core matrix system for analyzing samples via radiation absorption/emission using a diode laser, which can have a variety of including x-ray and IR spectra *(col3/l21-31) (claims 27, 35, 36, 37, 38)*. The system of Vann comprises a rack and a plate *(see Figure 1)*, with a lifting and lowering mechanism for reagents *(Figures 7a and 8a) (claims 29, 30 and 34)*. Additionally, the reference discloses that using such a system provides quick and accurate dispensing of multiple reagents *(Col2/L15-19)*. It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the system of Vann with the method of Duffield because it would provide a quick and accurate management of many samples.

Regarding claim 37, Duffield-Vann does not particularly disclose the specific angle of incidence of the radiation to be less than or equal to 2.50 degrees. As the absorbance is a variable that can be modified, among others, by adjusting the angle of incidence of the radiation, with said absorbance changing as the angle changes, the precise angle of incidence would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed angle cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the angle in the method of Duffield-Vann to obtain the desired absorbance (*In re Boesch*, 617 F.2d. 272, 205, USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

7. **Claim 31** is rejected under 35 U.S.C. 103(a) as being unpatentable over Duffield in view of Vann as applied to claims 27-30 and 32-38 above, further in view of Maher et al (US 7312043) (Maher).

Regarding claim 31, Duffield-Vann do not specifically disclose the method wherein the top plate of the rack absorbs radiation.

Maher discloses properties of multiwell plates, which can have many optical properties including the absorbance of radiation for the prevention of cross talk and increase accuracy *(Col17/L55-66) (claim 31)*. It would have been obvious to one having ordinary skill in the art to adjust the optical properties of the rack in Duffield-Vann because it prevents optical cross-talk and increases accuracy.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID WEISZ whose telephone number is (571)270-7073. The examiner can normally be reached on Monday - Thursday, 7:30 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571)272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

4/23/2009

/Yelena G. Gakh/
Primary Examiner, Art Unit 1797

/D. W./
Examiner, Art Unit 1797